

AMENDMENTS TO THE CLAIMS

In the claims

1. (currently amended) An operations, management, capacity, and services
5 (OMCS) tool for assessing business solutions comprising alternative network architectures and management processes for a telecommunications network, the tool comprising:
- (a) means for inputting data and options for plurality of network architectures,
10 network management processes, and service and customer management processes by an analyst;
- (b) means for engineering the plurality of network architectures based on the data and options of (a);
- (c) means for determining suppliers' equipment costs for said plurality of network architectures;
- 15 (d) means for engineering the network management processes and the service and customer management processes, based on the data and options of (a), ~~wherein the management processes comprising network management processes and service and customer management processes~~ for managing said plurality of network architectures;
- 20 (e) means for determining suppliers' management processes costs for the network management processes and the service and customer management processes;
- (f) means for validating and calibrating the data and options and the costs for the plurality of network architectures, ~~[[and]]~~ the network management processes, and the service and customer management processes;
- 25 (g) means for determining, based on the costs of the plurality of network architectures and the network management processes and the service and customer management processes, business parameters for the business solutions; and
- 30 (h) means for storing or displaying the business parameters for the business solutions for the telecommunications network.

2. (currently amended) The tool as described in claim 1, wherein the means (a) comprises means for inputting traffic data; customer data; and financial and ~~labour~~ labor data.
- 5 3. (currently amended) The tool as described in claim 2, wherein the means (a) further comprising:
- means for inputting technology options ~~comprising one or more of the following technology~~ which comprise at least one of: time division multiplexing (TDM), asynchronous transfer mode (ATM), frame relay (FR),
10 Internet protocol (IP), virtual private network (VPN), multi protocol label switching (MPLS), and optical Ethernet including fiber, synchronous optical network (SONET), resilience packet ring (RPR), and dense wavelength division multiplexing (DWDM) for a network architecture for a business solution; [[and]]
 - 15 - means for inputting ~~management processes~~ options for the network management processes ~~and the service and customer management processes~~ which comprise at least one of: inside plant maintenance, outside plant maintenance, network engineering, network provisioning, installation, testing, and repairs for managing the network architecture for the business
20 solution; and
 - means for inputting options for the service and customer management processes which comprise at least one of: customer relationship management (CRM), work order management (WOM), network inventory management (NIM), service activation and provisioning (SAP), fault management (FM),
25 performance management (PM), accounting and billing, and security management for managing the network architecture for the business solution.
4. (currently amended) The tool as described in claim 1, wherein the means (g) comprises:
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- means for computing the business parameters for the business solutions over a pre-determined study period; and

- means for determining ~~one or more of the following~~ business parameters which comprise at least one of: capital expenditure (CAPEX), wherein the CAPEX comprises a network architecture cost, taxes, interests, and depreciation and amortization (D/A) expenses; operational expenditure (OPEX), wherein the OPEX comprises a management processes cost, a leasing cost, and sales, general and administration (SG&A); revenue; capacity; return on investment (ROI); earnings before interest, taxes, and depreciation and amortization (EBITDA); earnings before interest and taxes (EBIT); ~~the CAPEX as percentage of the revenue; the OPEX as percentage of the revenue; the D/A as percentage of the revenue; the SG&A as percentage of the revenue;~~ and total expenditure as percentage of the revenue, wherein the total expenditure comprises the CAPEX and the OPEX.
5. (currently amended) The tool as described in claim 3, wherein the means (b) comprises means for engineering the network architecture for the business solution, ~~wherein the network architecture having one or more of the following technology: time division multiplexing (TDM), asynchronous transfer mode (ATM), frame relay (FR), Internet protocol (IP), virtual private network (VPN), multi protocol label switching (MPLS), and optical Ethernet including fiber, synchronous optical network (SONET), resilience packet ring (RPR), and dense wavelength division multiplexing (DWDM).~~
6. (previously presented) The tool as described in claim 3, wherein the means (d) comprises means for engineering the network management processes and the service and customer management processes for managing the network architecture for the business solution.
7. (previously presented) The tool as described in claim 4, wherein the means (h) comprises means for displaying the business parameters in tables and graphical charts for the business solutions over the pre-determined study period.

8. (previously presented) The tool as described in claim 5, wherein the means (c) comprises means for determining a network architecture cost and a leasing cost for the network architecture for the business solution.
- 5 9. (previously presented) The tool as described in claim 8, wherein the means (f) comprises means for validating and calibrating the data and options; the network architecture cost; and the leasing cost for said network architecture for the business solution.
- 10 10. (previously presented) The tool as described in claim 8, wherein the means (b) further comprising means for determining an owned network elements (NEs) count; a leased NEs count; an owned customer premise equipment (CPE) count; a leased CPE count; an owned links count; a leased links count; and a leased ports count for said network architecture; and wherein said network architecture
15 having NEs, CPE, and links from the same or different equipment suppliers.
11. (previously presented) The tool as described in claim 10, wherein the means (c) further comprising means for determining a price per network element (NE), a footprint per NE cost, a power consumption per NE cost; a price per CPE, a
20 footprint per CPE cost, and a power consumption per CPE cost; and a price per link and a link transmission rate.
12. (previously presented) The tool as described in claim 11, wherein the means for determining the network architecture cost comprises a means for computing
25 a total owned NEs cost; a total owned CPE cost; and a total owned links cost for said network architecture for the business solution; and wherein the means for determining the leasing cost comprises a means for computing a total footprints cost and a total power consumptions cost for said owned NEs and CPE.
- 30 13. (previously presented) The tool as described in claim 10, wherein the means (c) further comprising means for determining a leased per NE cost, a footprint per NE cost, and a power consumption per NE cost; a leased per CPE cost, a

footprint per CPE cost, and a power consumption per CPE cost; a leased per link cost; a leased link per unit length cost, a unit length per link count, and a link transmission rate; and a leased per port cost.

5 14. (previously presented) The tool as described in claim 13, wherein the means
for determining the leasing cost comprises a means for computing a total leased
NEs cost; a total leased CPE cost; a total footprints cost and a total power
consumptions cost for said leased NEs and CPE; a total leased links cost; a total
10 leased links per unit length cost; and a total leased ports cost for said network
architecture for the business.

15 15. (currently amended) The tool as described in claim 6, wherein the means (e)
comprises:

- means for determining a management processes cost comprising a
15 network management processes cost, wherein the means for determining
the network management processes cost comprises means for determining
costs for inside plant maintenance, outside plant maintenance, network
engineering, network provisioning, installation, testing, and repairs for
each network element in the network architecture for the business
20 solution; [[and]]

- means for determining a service and customer management processes cost
for the business solution, wherein the means for determining the service
and customer management processes cost comprises means for
25 determining costs for customer relationship management (CRM), work
order management (WOM), network inventory management (NIM),
service activation and provisioning (SAP), fault management (FM),
performance management (PM), accounting and billing, and security
management for each link in the network architecture for the business
30 solution; and

- means for determining a management processes cost which comprises the
network management processes cost and the service and customer
management processes cost means.

16. (currently amended) The tool as described in claim 15, wherein the means for engineering the network management processes comprises a means for engineering ~~one or more~~ at least one of the following processes: inside plant maintenance; outside plant maintenance; network engineering; network provisioning; installation; testing; and repairs.
17. (currently amended) The tool as described in claim 16, further comprising means for determining the network management processes cost for said network management processes for ~~one or more of the following~~ at least one of: a manual operations mode; a mechanized operations mode; and a manual and mechanized operations mode.
18. (currently amended) The tool as described in claim 15, wherein the means for engineering the service and customer management processes comprises a means for engineering ~~one or more~~ at least one of the following processes: customer relationship management (CRM); work order management (WOM); network inventory management (NIM); service activation and provisioning (SAP); fault management (FM); performance management (PM); accounting and billing; and security management.
19. (currently amended) The tool as described in claim 18, further comprising means for determining costs of the service and customer relationship management (CRM); processes cost for said service and customer the work order management (WOM); the network inventory management (NIM); the service activation and provisioning (SAP); the fault management (FM); the performance management (PM); the accounting and billing; and the security management processes for ~~one or more of the following~~ at least one of: a manual operations mode; a mechanized operations mode; and a manual and mechanized operations mode.
20. (canceled)

21. (currently amended) The tool medium as described in claim [[20]] 19,
wherein the means for determining the cost of the customer relationship
management (CRM) [(i)] comprises means for determining costs for at least
one of: a work order entry and validation process; a service delivery and work
5 order processing process; a customer care process; a trouble ticketing process;
and a service assurance and performance reporting process. ~~causing the~~
~~computer to receive traffic data; customer data; and financial and labour data.~~
22. (currently amended) The tool medium as described in claim [[21]] 19,
10 wherein the means for determining the cost of the work order management
(WOM) comprises means for determining costs for at least one of: a work order
processing process; a client management process; a report management process;
and an administration management process. ~~(i) further comprising:~~
~~—means for causing the computer to receive technology options comprising~~
15 ~~one or more of the following technology: time division multiplexing (TDM),~~
~~asynchronous transfer mode (ATM), frame relay (FR), Internet protocol (IP),~~
~~virtual private network (VPN), multi protocol label switching (MPLS), and~~
~~optical Ethernet including fiber, synchronous optical network (SONET),~~
~~resilience packet ring (RPR), and dense wavelength division multiplexing~~
20 ~~(DWDM) for a network architecture for a business solution; and~~
~~—means for causing the computer to receive management processes options~~
~~for the network management processes and the service and customer~~
~~management processes for managing the network architecture for the~~
~~business solution.~~
23. (currently amended) The tool medium as described in claim [[22]] 19,
25 wherein the means for determining the cost of the network inventory
management (NIM) [(ii)] comprises means for determining costs for at least
one of: a customer, services, and resources association management process; an
30 equipment management process; and a network management process. ~~causing~~
~~the computer to engineer the network architecture for the business solution,~~
~~wherein the network architecture having one or more of the following~~

~~technology: time division multiplexing (TDM), asynchronous transfer mode (ATM), frame relay (FR), Internet protocol (IP), virtual private network (VPN), multi protocol label switching (MPLS), and optical Ethernet including fiber, synchronous optical network (SONET), resilience packet ring (RPR), and dense wavelength division multiplexing (DWDM).~~

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24. (currently amended) The ~~tool~~ ~~medium~~ as described in claim ~~[[23]]~~ 19, wherein the means for determining the cost of the service activation and provisioning (SAP) ~~[[iii]]~~ comprises means for determining costs for at least one of: a create a new service process; a customer association process; a process for aligning and synchronizing with billing, maintenance, and performance; and a resource discovery and database quires process. ~~causing the computer to compute a network architecture cost and a leasing cost for the network architecture for the business solution.~~
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25. (currently amended) The ~~tool~~ ~~medium~~ as described in claim ~~[[22]]~~ 19, wherein the means for determining the cost of the fault management (FM) ~~[[iv]]~~ comprises means for determining costs for at least one of: a trouble ticketing process; an isolate problem process; and an analysis and resolution for service logic agreement (SLA) process. ÷
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- ~~— means for causing the computer to engineer one or more of the following network management processes: inside plant maintenance, outside plant maintenance, network engineering, network provisioning, installation, testing, and repairs for managing the network architecture for the business solution; and~~
 - ~~— means for causing the computer to engineer one or more of the following service and customer management processes: customer relationship management (CRM), work order management (WOM), network inventory management (NIM), service activation and provisioning (SAP), fault management (FM), performance management (PM), accounting and billing, and security management for managing the network architecture for the business solution.~~

26. (currently amended) The ~~tool medium~~ as described in claim [[25]] 19,
wherein the means for determining the cost of the performance management
(PM) [(v)] comprises means for determining costs for at least one of: a collect
5 performance data process; a generate performance reports process; and a
validate service logic agreement (SLA) process. ÷
— ~~means for causing the computer to compute a network management~~
~~processes cost for the network management processes for one or more of the~~
~~following: a manual operations mode, a mechanized operations mode, and a~~
~~manual and mechanized operations mode;~~
10 — ~~means for causing the computer to compute a service and customer~~
~~management processes cost for the service and customer management~~
~~processes for one or more of the following: a manual operations mode, a~~
~~mechanized operations mode, and a manual and mechanized operations~~
~~mode; and~~
15 — ~~means for causing the computer to compute a management processes cost~~
~~comprising the network management processes cost and the service and~~
~~customer management processes cost.~~
27. (canceled)
28. (canceled)
29. (canceled)
- 25 30. (canceled)
31. (currently amended) A ~~computer implement~~ method for assessing business
solutions comprising alternative network architectures and management
processes for a telecommunications network, the method comprising the steps
30 of:

- (n) inputting data and options for plurality of network architectures, network management processes, and service and customer management processes by an analyst;
- (m) engineering the plurality of network architectures based on the data and options of (n);
- (u) determining suppliers' equipment costs for said plurality of network architectures;
- (v) engineering the network management processes and the service and customer management processes, based on the data and options of (n), ~~wherein the management processes comprising network management processes and service and customer management processes~~ for managing said plurality of network architectures;
- (w) determining suppliers' management processes costs for the network management processes and the service and customer management processes;
- (x) determining, based on the costs of the plurality of network architectures and the network management processes and the service and customer management processes, business parameters for the business solutions;
- (y) validating and calibrating the data and options and the costs for the plurality of network architectures and the network management processes and the service and customer management processes; and
- (z) storing or displaying the business parameters for the business solutions for the telecommunications network.
32. (currently amended) The method as described in claim 31, wherein the step (x) comprises:
- computing the business parameters for the business solutions over a pre-determined study period; and
 - determining ~~one or more of~~ at least one of the following business parameters which comprise: capital expenditure (CAPEX), wherein the CAPEX comprises a network architecture cost, taxes, interests, and depreciation and amortization (D/A) expenses; operational expenditure (OPEX), wherein the

OPEX comprises a management processes cost, a leasing cost, and sales, general and administration (SG&A); revenue; capacity; return on investment (ROI); earnings before interest, taxes, and depreciation and amortization (EBITDA); earnings before interest and taxes (EBIT); ~~the CAPEX as percentage of the revenue;~~ the OPEX as percentage of the revenue; ~~the D/A as percentage of the revenue;~~ the SG&A as percentage of the revenue; and total expenditure as percentage of the revenue, wherein the total expenditure comprises the CAPEX and the OPEX.

- 10 33. (currently amended) The method as described in claim 31, wherein the step (n) comprises:
- inputting traffic data, customer data, and ~~labour~~ labor and financial data;
 - inputting technology options ~~comprising one or more of the following technology which comprise at least one of:~~ time division multiplexing (TDM), asynchronous transfer mode (ATM), frame relay (FR), Internet protocol (IP), virtual private network (VPN), multi protocol label switching (MPLS), and optical Ethernet including fiber, synchronous optical network (SONET), resilience packet ring (RPR), and dense wavelength division multiplexing (DWDM) for a network architecture for a business solution; [[and]]
 - inputting ~~management processes~~ options for the network management processes ~~and the service and customer management processes which comprise at least one of: inside plant maintenance, outside plant maintenance, network engineering, network provisioning, installation, testing, and repairs~~ for managing the network architecture for the business solution; and
 - inputting options for the service and customer management processes which comprise at least one of: customer relationship management (CRM), work order management (WOM), network inventory management (NIM), service activation and provisioning (SAP), fault management (FM), performance management (PM), accounting and billing, and security management for managing the network architecture for the business solution.

34. (previously presented) The method as described in claim 33, wherein the step (u) comprises determining a network architecture cost and a leasing cost for the network architecture for the business solution.
- 5 35. (currently amended) The method as described in claim 34, wherein the step (m) comprises engineering the network architecture for the business solution;
~~wherein the network architecture having one or more of the following~~
~~technology: time division multiplexing (TDM), asynchronous transfer mode~~
~~(ATM), frame relay (FR), Internet protocol (IP), virtual private network (VPN),~~
10 ~~multi protocol label switching (MPLS), and optical Ethernet including fiber,~~
~~synchronous optical network (SONET), resilience packet ring (RPR), and dense~~
~~wavelength division multiplexing (DWDM).~~
- 15 36. (currently amended) The method as described in claim 33, wherein the step (v) comprises:
- engineering ~~one or more of the following~~ network management processes
which comprise engineering at least one of the following processes: inside
plant maintenance, outside plant maintenance, network engineering, network
provisioning, installation, testing, and repairs ~~for managing the network~~
20 ~~architecture for the business solution;~~ and
- engineering ~~one or more of the following~~ service and customer management
processes which comprises engineering at least one of the following
processes: customer relationship management (CRM), work order
management (WOM), network inventory management (NIM), service
25 activation and provisioning (SAP), fault management (FM), performance
management (PM), accounting and billing, and security management ~~for~~
~~managing the network architecture for the business solution.~~
- 30 37. (currently amended) The method as described in claim 36, wherein the step (w) comprises:
- determining a network management processes cost for the network
management processes, which comprises determining costs of inside plant

- 5 maintenance, outside plant maintenance, network engineering, network provisioning, installation, testing, and repairs for each network element in the network architecture for the business solution for ~~one or more of the following~~ at least one of: a manual operations mode, a mechanized operations mode, and a manual and mechanized operations mode;
- 10 - determining a service and customer management processes cost for the service and customer management processes, which comprises determining costs of customer relationship management (CRM), work order management (WOM), network inventory management (NIM), service activation and provisioning (SAP), fault management (FM), performance management (PM), accounting and billing, and security management for each link in the network architecture for the business solution for ~~one or more of the following~~ at least one of: a manual operations mode, a mechanized operations mode, and a manual and mechanized operations mode; and
- 15 - determining a management processes cost comprising the network management processes cost and the service and customer management processes cost.
- 20 38. (previously presented) The method as described in claim 32, wherein the step (z) comprises a step of tabulating and graphically charting the business parameters for said business solutions over said pre-determined study period.
39. (new) A computer-readable medium containing program instructions for causing a computer to perform the method of claim 31.